

Montana Department of Natural Resources and Conservation  
Water Resources Division  
Water Rights Bureau

**ENVIRONMENTAL ASSESSMENT**  
**For Routine Actions with Limited Environmental Impact**

**Part I. Proposed Action Description**

1. Applicant/Contact name and address: **Flathead County Water District #8  
PO Box 922  
Whitefish, MT 59937**
2. Type of action: **Application for Beneficial Use Permit (76LJ 30063778)**
3. Water source name: **Groundwater**
4. Location affected by project: **Section 25 Township 30 North - Range 22 West &  
Sections 29 & 30 Township 30 North - Range 21 West, Flathead County**
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

**The Applicant proposes to divert groundwater from a deep aquifer in the Flathead Valley by means of two wells referred to in this document as PWS 4 (450 feet deep) and PWS 5 (626 feet deep). Both wells are located in the Happy Valley subdivision, Gov. Lot 2 in the S2N2 Section 30, T30N, R21W, Flathead County. PWS 4 is an existing well covered under two existing water rights (76LJ 17665 and 76LJ 32245), while PWS 5 is a new well. The capacity of PWS 4 is proposed to be expanded from 100 gallons per minute (gpm) to 150 gpm, for a new appropriation of 50 gpm, and PWS 5 will be a new appropriation of 250 gpm. PWS 4 and PWS 5 will operate on a rotating basis (they will not operate simultaneously), therefore the flow rate for purposes of this application will not exceed the capacity of the highest well (PWS 5), or 250 gpm. The total diverted volume for purposes of this application will be 205.34 acre-feet (83.34 acre-feet for Multiple Domestic purposes, and 122.0 acre-feet for Lawn/Garden Irrigation purposes). The period of diversion and period of use for the Multiple Domestic purpose from both wells is January 1 through December 31. The period of use for Lawn & Garden irrigation is April 15 through October 15.**

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:  
(include agencies with overlapping jurisdiction)

**Dept. of Environmental Quality Website - TMDL 303d listing  
MT. National Heritage Program Website - Species of Concern**

USDI Fish & Wildlife Service Website - Endangered and Threatened Species  
MT State Historic Preservation Office - Archeological/Historical Sites  
USDA Natural Resources Conservation Service – Web Soil Survey  
USDI Fish & Wildlife Service – Wetlands Online Mapper  
Montana Fish, Wildlife & Parks – MFISH Website

## **Part II. Environmental Review**

### **1. Environmental Impact Checklist:**

<b>PHYSICAL ENVIRONMENT</b>
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#### **WATER QUANTITY, QUALITY AND DISTRIBUTION**

**Water quantity** - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

*Determination:*           **No Significant Impact**

The source of supply for this proposed appropriation is groundwater from the Flathead Valley Deep Aquifer. None of the potentially impacted surface water sources (Flathead, Stillwater, & Whitefish Rivers) are listed by DFWP as chronically or periodically dewatered. Upon analysis by the Department, groundwater and surface water sources were found to either have water in excess of that requested by the Applicant or are thought to have a disconnect. In the case of the Stillwater River, the deep aquifer is separated from the river-adjacent shallow alluvium in the area of interest by an aquaclude of sediment derived from glacial till and/or lacustrine processes.

**Water quality** - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

*Determination:*           **No Significant Impact**

The source of supply for this proposed appropriation is groundwater, however as mentioned in the next section, surface water sources could experience minor impacts due to the hydraulic connection of the two sources. According to the MDEQ's Clean Water Act Information Center in 2012, the Flathead River was categorized as being "not assessed" for beneficial use support. Flathead Lake is listed as having one or more uses impaired due to one or more of the following probable causes: mercury, total nitrogen, total phosphorous, polychlorinated biphenyls and sedimentation/siltation.

The Whitefish River has not been assessed for primary contact recreation, but was found to support drinking water and agricultural use. Aquatic life in the Whitefish River is not supported based on copper and lead concentrations, total nitrogen levels, oil and grease, PCB's and water temperature. A TMDL is required for the Whitefish River. As mentioned in the preceding section, the Stillwater River is not considered hydraulically connected to the deep aquifer in the area of potential impact; a TMDL is also required for the Stillwater

River. The Happy Valley subdivision has been developed for years and have existing water rights that cover beneficial use on all but 31 of 212 lots. As such, the new appropriation for this permit is 30 acre-feet, with 12.2 acre-feet used for multiple domestic use and 17.8 acre-feet diverted for lawn & garden irrigation on the 31 lots. Consumptive use on the 31 lots is 13.7 acre-feet, equating to a year-round depletion of 8.5 gpm. A depletion of 8.5 gpm is not expected to significantly affect water quality in nearby surface water sources.

**Groundwater** - Assess if the proposed project impacts ground water quality or supply.  
*If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

**Determination:**           **Minor Impact**

The proposed groundwater appropriation is from the Kalispell Valley alluvial aquifer at a flow rate of 250 GPM and volume up to 205.38 AF per year. Department experts state there were limited procedural shortcomings related to measurement/monitoring precision and sampling frequency during the aquifer test; however, testing and results are adequate because there would be no significant differences in analytical results and interpretations expected if a new test were performed.

Applicant calculated groundwater flux through the zone of influence of the wells, but noted that physical water availability in the Kalispell Valley deep aquifer cannot be determined under this traditional method of analysis. In order to address this problem, the Applicant invoked a memorandum by Department Groundwater Hydrologists Russell Levens and James Heffner, which explained the unique circumstances of groundwater in the region. The Department memo concludes that calculating aquifer flux in the area does not account for the groundwater-surface water hydraulic connection, and that groundwater levels are controlled by the Flathead River and Flathead Lake. The memo states:

*“A new groundwater user will not alter the regional gradient, and thus the aquifer flux. A new groundwater user will, however, reduce the discharge from the aquifer to the river and lake, generally in an amount equivalent to their consumptive use.”*

In order to address reduced discharge to surface water sources, Applicant provided legal demands analysis for Flathead River & Flathead Lake, Whitefish River and the Stillwater River. Water is legally available in all sources with the exception of the Stillwater River, which is not considered to be hydraulically connected to the deep aquifer in the affected reach due to a confining layer of glacial till and lake sediment between the deep aquifer and the shallow alluvium connected to the river. No major impacts to groundwater quality or supply are expected because of this project.

**DIVERSION WORKS** - Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

**Determination:**           **No Significant Impact**

The proposed means of diversion are two public water supply groundwater wells, one existing and one new. The wells will be manifolded into an existing system that includes a

third public water supply well. All wells associated with the system were drilled by licensed water well drillers in the State of Montana. Improvements were designed by Carver Engineering of Kalispell, Montana. These improvements have been constructed in order to meet maximum daily water demands by FCWD-8, and as directed by the Department of Environmental Quality.

The water supply system for FCWD-8 includes the following components: three manifolded public water supply wells, a booster pump-station, two storage tanks with a combined capacity of 232,000 gallons, 8-inch mainline piping, and 4 to 6-inch distribution piping. Water will be diverted based on demands of subdivision residents. The storage tanks are filled when water levels in the tanks drop below a defined level. Booster pumps are utilized to maintain pressure in the system. No significant impacts from the diversion works are anticipated from the new well and the remainder of the system has been in place and operating for years.

#### **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

**Endangered and threatened species** - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

*Determination:*           **No Significant Impact**

The Montana National Heritage Program lists four Species of Concern and one Potential Species of Concern within Township 30 North Range 22 West and four Species of Concern within Township 30 North Range 21 West. Common names for these five species are the Black-tailed Prairie Dog, Burrowing Owl, Greater Sage-Grouse, Wolverine, Canada Lynx, Fisher, Great Blue Heron, Pileated Woodpecker, Common Loon, Northern Alligator Lizard, Bull Trout & the Subarctic Bluet. The Montana National Heritage Program also lists three plant species as Species of Concern within Township 30 North Range 22 West. Common names for these three species are the Watershield, the Pygmy Water-lily & the Water Bulrush. The USDI Fish & Wildlife Service Website shows that Flathead County has four species listed as threatened; the Bull Trout, Grizzly Bear, Spalding's Campion & Canada Lynx. Since this project is associated to ground water withdrawals and these parcels along with many adjacent properties have existing high population densities, there is a low likelihood of impact to endangered or threatened species because of this appropriation.

**Wetlands** - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

*Determination:*           **No Significant Impact**

The National Wetlands Inventory does not show any wetland areas in the near vicinity of the wellheads. The website program does show Freshwater Emergent type wetlands and

**ponds in nearby drainages; however, impacts to these ephemeral sources and associated wetlands from this groundwater development are not expected to be significant.**

**Ponds** - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

*Determination:*           **No Impact**

**There are no known ponds associated with this application.**

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

*Determination:*           **No Significant Impact**

**The predominant soil type underlying the Happy Valley subdivision is the Whitefish gravelly silt loam, a well-drained soil derived from glacial till that has a moderate available water capacity. This soil profile is largely nonsaline; impacts to soil quality, stability and moisture content are not expected to be significant.**

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

*Determination:*           **No Significant Impact**

**Other than the temporary construction associated with tying the new well into the existing pipeline conveying water to the subdivision, no new permanent impacts to vegetative cover are anticipated. It is the responsibility of the property owner to control noxious weeds on their property.**

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

*Determination:*           **No Impact**

**No impacts to air quality have been identified. Pumps in the wells will be powered by electric motors.**

**HISTORICAL AND ARCHEOLOGICAL SITES** - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

*Determination:*           **No Significant Impact**

**Not Applicable – Project not located on State or Federal Lands.**

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY** - Assess any other impacts on environmental resources of land, water and energy not already addressed.

Determination: **No Significant Impact**

**No significant impacts are anticipated. There may be a slight increase in electrical energy consumption associated with new well operation.**

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: **No Significant Impact**

**No local environmental plans or goals have been identified.**

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

Determination: **No Significant Impact**

**The proposed action should not negatively affect recreational activities in the area.**

**HUMAN HEALTH** - Assess whether the proposed project impacts on human health.

Determination: **No Significant Impact**

**No impacts to human health have been identified.**

**PRIVATE PROPERTY** - Assess whether there are any government regulatory impacts on private property rights.

Yes\_\_\_ No X\_\_\_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: **No Significant Impact**

**OTHER HUMAN ENVIRONMENTAL ISSUES** - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

(a) Cultural uniqueness and diversity? **None**

(b) Local and state tax base and tax revenues? **None**

- (c) Existing land uses? **None**
- (d) Quantity and distribution of employment? **None**
- (e) Distribution and density of population and housing? **Existing Subdivision**
- (f) Demands for government services? **None**
- (g) Industrial and commercial activity? **None**
- (h) Utilities? **New well pump will be powered by electric motor.**
- (i) Transportation? **None**
- (j) Safety? **None**
- (k) Other appropriate social and economic circumstances? **None**

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: **No Secondary Impacts have been identified**

Cumulative Impacts: **No Cumulative Impacts have been identified**

3. *Describe any mitigation/stipulation measures:*

**The Department will likely deem a specific measurement condition necessary to meet the statutory criteria for new permits set forth at § 85-2-311, MCA. This condition would be required in the Departments' preliminary determination and permit authorization, if applicable.**

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

**No action alternative: Deny the permit application. This alternative would result in no beneficial use to the Applicant.**

*PART III. Conclusion*

1. *Preferred Alternative:*

**The preferred alternative is the proposed action.**

2 *Comments and Responses:*

**None Received.**

3. *Finding:*  
*Yes\_\_\_ No\_X\_\_ Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:*

**None of the identified impacts for any of the alternatives are significant as defined in ARM 36.2.524.**

*Name of person(s) responsible for preparation of EA:*

*Name:* **Douglas Mann**

*Title:* **Water Resources Specialist**

*Date:* **11/22/2013**